Before the
Federal Communications Commission
Washington, D.C. 20554

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In the Matter of	**)**	
Telecommunications Relay Services	**)**	CC Docket No. 98-67
And Speech to Speech Services for	**)**	
Individuals with Hearing and Speech	**)**	
Disabilities	**)**	
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Reply Comments of Dana Mulvany, MSW, LCSW
August 20, 2001

I submit these comments in response to comments submitted to the Commission in its June 29, 2001 Notice seeking comment on WorldCom's petition for clarification that Internet (IP Relay) is eligible for reimbursement from the Interstate TRS Fund.

I offer these reply comments as an individual with bilateral severe hearing loss and not on behalf of any organization which which I am affiliated.

Conversion Protocol Services

AT&T recommends funding conversion protocol services at the same rate that regular relay services receive. NAD supports the funding of this service without referring to the relative cost of other relay services. SHHH, Ronald Vickery, Katherine Keller, and I have all supported the funding of conversion protocol services with the presumption that the actual cost of these services should be less than the cost of relay services requiring a CA and should therefore be reimbursed at a lower rate. TDI did not recommend funding conversion protocol services such as ASCII to TTY, but did not appear to have had sufficient information about the operations of such a service and how it would increase functional equivalence to telephone calls. In TDI's defense, little information has been made available about how such a conversion protocol service would work. AT&T itself, which provides a bridging service between computers and TTYs, does not publicize this service due to the lack of funding for the service at a federal level.

A new development with respect to conversion protocols is that NXI Communications recent provision of IP conversion protocol services via a subscription service. Users of the service have an account at http://www.nextalk.net which then allows them to receive calls from TTY users and to call TTY users (while logged into the service on the Internet). The IP-to-TTY service is completely automated; I think but am not sure that the TTY-to-IP service is also automated. Such services would be very useful to non-TTY users who wish to communicate directly with

TTY users; however, if there is a cost to them for using this service, they would be more likely to bypass this service in favor of "free" relay services which are actually expensive to TRS funds. In order to provide functionally equivalent access to telephone communication for all people with communication disabilities, bridges such as IP-to-TTY and TTY-to-IP should be provided at no additional cost to the consumer. Conversion protocol services would allow most users to communicate much more quickly, independently and accurately, economizing the use of TRS funds even if the bridges were funded at the same rate of regular relay services. (I assume here that well-informed consumers will tend to use the relay service that is most efficient for them when other factors are equal. People who type very poorly would generally wish to use regular relay services; fast hearing typists would want to bypass relay services to type directly to TTY users. Hard of hearing people who normally use the phone by voice but who have significant trouble understanding relay service operators would prefer direct text communication with TTY users via bridges.

(Unfortunately, it has been my experience that most relay service operators currently do not accommodate hard of hearing people using the relay service by voice. They tend to speak in a hurried monotone---extremely detrimental for speech comprehension. They also refuse to repeat what the hard of hearing missed without relaying the request to the TTY user. Relay operators have literally stopped relaying laboriously typed messages from the TTY user to type a request to repeat something that had not been understood; the hard of hearing person had needed the CA to repeat what was said by speaking more slowly and clearly. The hard of hearing person thus can miss entire segments of a relayed call. Although clearly relay services need to be changed so that they accommodate the needs of voice users better, direct communication via a bridge would avoid such inefficient, frustrating and costly exchanges and provide callers the ability to see exactly what is transmitted and to monitor exactly what is expressed.)

The actual operating costs of providing automated bridges would appear to be considerably less than providing CA-assisted relay services. It has not been explained by parties such as AT&T why conversion protocol services should be reimbursed at the high rate of CA-assisted calls. Relay services providing Internet Relay services could be disinclined to provide less well-reimbursed conversion protocol services which essentially compete with their more lucrative relay services. Companies that do not provide regular relay services should be eligible to compete for reimbursement from the TRS funds; they may be able to provide better conversion protocol services than the Internet relay service providers themselves might tend to provide. The FCC might consider a bidding process or some other process to negotiate a suitable rate of reimbursement, and it would certainly be important to allow companies that do not otherwise provide relay services to participate in such a process. (Note also that it would be advantageous to TRS funds to fund services capable of enabling voice users to dictate their input at a rate significantly higher than that provided by current relay services. Current relay services may not be financially motivated to provide more efficient relay services but other parties with expertise in working with speech recognition software should be encouraged to develop speech-to-text conversion protocol services which could be used by voice users for relay purposes.)

Relay services that qualify for funding from the TRS funds should be required to provide links on their web site to provide relevant information about other services, such as conversion protocol services. Perhaps the FCC could provide a web page providing information about

currently funded service providers and require all funded service providers to provide a link to this page. This would have the benefit of informing consumers about different types of relay services, such as conversion protocol services and Voice-over-IP services. Consumers need to have a systematic way of locating the different types of relay services that are available.

Minimum Standards

Worldcom, discussing a temporary waiver of the speed of answer requirement in its reply comments, incorrectly states: "Dana Mulvaney [sic] and Ronald Vickery offer general support for flexibility with regard to mandatory minimum standards for IP-Relay." (page 5). On the contrary, I had suggested higher requirements in some areas, and the only exception that I had noted was for voice-over-IP services. AT&T, which has experience providing Internet relay, recommends "an average speed of answer requirement that begins when the customer reaches the relay provider's call center." (page 9). I am not convinced of a need to relax the standard for the speed of answer requirement beyond what AT&T has proposed. However, Worldcom points out that accurately projecting demand for a new service like this could be difficult. I suggest that AT&T's suggestion be implemented, but that the FCC have latitude in forgiving fines the first year if providers show they are making continuously concerted efforts to meet increasing levels of service. The expectation should be that they will meet foreseeable levels of service but that fines will not be assessed if they can show there are extenuating circumstances (such as unpredictable demand).

AT&T encourages the adoption of a *separate* set of minimum requirements for IP relay. This appears to be a practical idea, and I would suggest implementing additional requirements to better utilize the functionality of the Internet.

For example, one such requirement could be to provide web pages designed to expedite two line voice carry over (2LVCO) or two line hearing carry over. This could be achieved by designing a separate web page for each type of relay service which a user could bookmark. The 2LVCO page would have separate boxes where the user would insert his or her own voice phone number and the number of the party to be contacted. The relay service would first dial the voice number, and then upon connection and direction from the user, immediately dial the second number and conference the voice line to that number as quickly as it is technically feasible to do so. The relay operator's microphone should then automatically be muted. AT&T's web site had a separate "box" for the phone number of the party to be called; their software appears ready to dial phone numbers directly (and thus more quickly and accurately). In contrast, Worldcom's Internet relay service required the user to type the phone number during the call, and there was quite a delay before the outgoing call was connected. (Because I have used IP Relay for two-line VCO to call my own voice number, I can attest to waiting a mysteriously long time to be called after providing my own voice number.) Designing such web pages well, if integrated with the software using for dialing phone numbers, could greatly assist relay agents who often have difficulty figuring out how to conduct a two line voice- or hearing carry over call and who unfortunately waste much of the user's time figuring out what to do.

Another requirement should be the ability to paste text into the call and to compose text for the relay agent prior to initiating the call. For example, if a user anticipates reaching a voice menu, it is very helpful for the user to tell the relay agent the purpose of the call and to authorize the

agent to make the appropriate selections. Rather than typing at 10 words a minute or even 60 words a minute while the relay service is being paid at over a dollar a minute, the user should have the option of composing text ahead of time.   There are many advantages to this, such as improving the accuracy of what the consumer types, increasing the speed of the call (reducing the cost), and reducing the risk of repetitive stress disorders for consumers by allowing them to type as much text as possible beforehand at a relaxed pace.

There may be special issues with providing services over the Internet which need to be addressed, such as frequently dropped relay calls. Worldcom's reply did not address this problem although I had raised this in my own comments; unfortunately, it remains unclear as to whether this problem is Internet-related. This problem does not appear to be attributed to hardware or software problems on my end as I have used Worldcom's IP Relay on at least three different computers and four different Internet connections (Ricochet, 2 different phone lines, and cable). I would suggest that Internet relay service providers provide an email address to report technical problems so that they are alerted of problems on their end that they need to investigate. Although I very much appreciate Worldcom's IP relay service, the high frequency of its dropped calls is a severe problem which needs to be investigated and resolved. I think I have had about five dropped calls out of approximately ten to fifteen IP relay calls----much too high a percentage.) There should be checks of the quality of IP Relay conducted by independent parties to ensure an acceptable level of service.

Miscellaneous Comments

Katherine Keller's comments about using IP relay show how people with speech disabilities can currently use it for outgoing two line hearing carry over (2LHCO). If voice to IP was provided as another IP relay service, people with speech disabilities would be able to use this order to handle incoming calls (reverse 2LHCO). The second way that people with speech disabilities could use IP relay is if they have three-way calling on their voice line, a separate Internet connection, and a method of receiving calls from IP relay via the Internet. (NXI Communications and Worldcom have agreed to provide such a method.) If a person with a speech disability (Psd) received a call and needed to bring in communication assistance, the Psd would put this call on hold and call the (toll-free) voice number of the IP relay service; ideally the customer profile of the originating caller would direct the IP relay to automatically contact the Psd's IP account so that no speaking by the Psd would be required. The Psd could immediately connect all three parties, and the IP relay agent would voice what the Psd types (which may occur only when the Psd cannot be understood by the caller). Such a service would enable people with communication disabilities to handle incoming calls. IP relay services should be required to work with customer profiles to expedite such calls, especially since time is of the essence for dealing with incoming calls.

Ms. Keller requested "that the Commission considers mandating provision of the three-way call capability." I believe she meant to support my suggestion that relay services provide three-way calling themselves. (The mechanics of 2LVCO and 2LHCO are very complex and difficult for the average person to remember easily.) If relay services provided three-way calling themselves, people making outgoing two line VCO or HCO calls via Internet relay would then not be limited to voice lines with pre-installed three-way calling. For people who use mobile phones as the

voice line and who have a limited number of minutes of airtime, it would be especially preferable not to be required to have two simultaneous phone calls on the mobile phone. The elimination of the requirement for three-way calling would bring 2LVCO and 2LHCO closer to functional equivalency in terms of reduced cost and improved ease of use.

Sincerely,

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